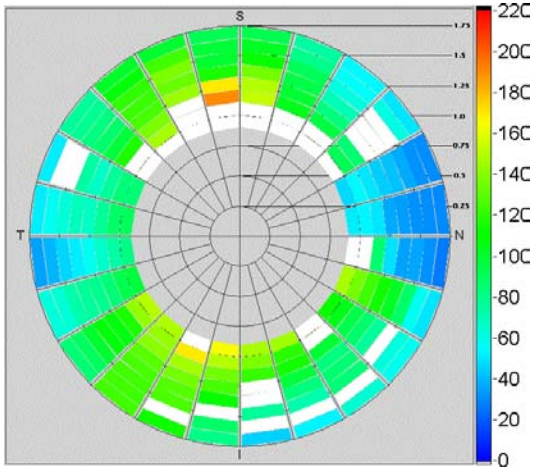
RNFL Polarization Imaging

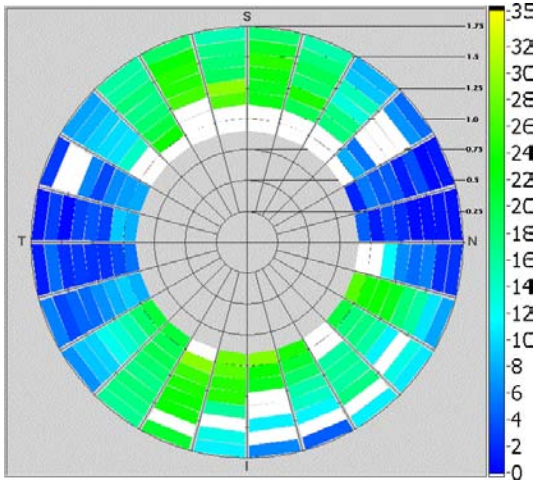
- UT Austin
  - Multiple incident state PR algorithm
  - Birefringence Maps of the normal primate RNFL
  - Measurements of *in situ* neural swelling
- MGH
  - Spectral domain OCT
  - Birefringence of the normal human RNFL
  - How does RNFL birefringence change in glaucoma?

Birefringence Imaging

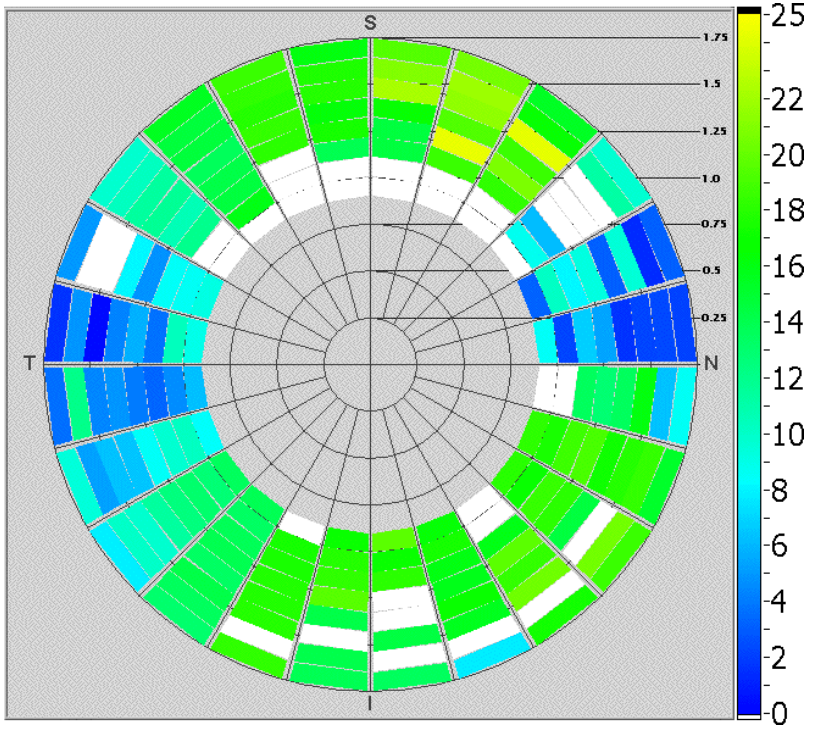
RNFLT(μm)



PR(°)



PR/UD(°/100μm)

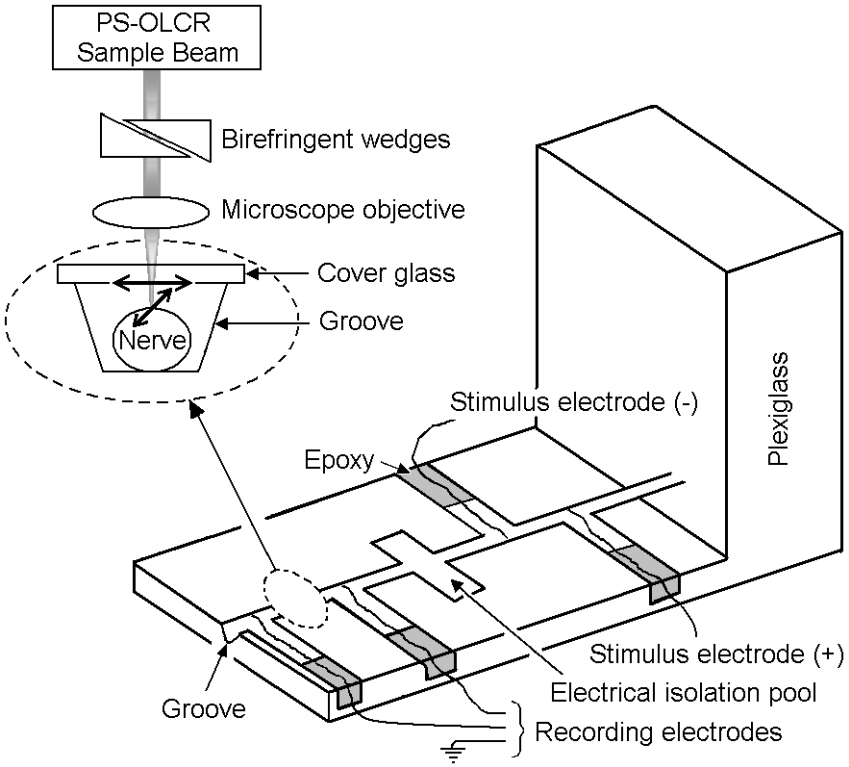


S/I = 17.38 °/100μm or Δn = 4 (10-4)

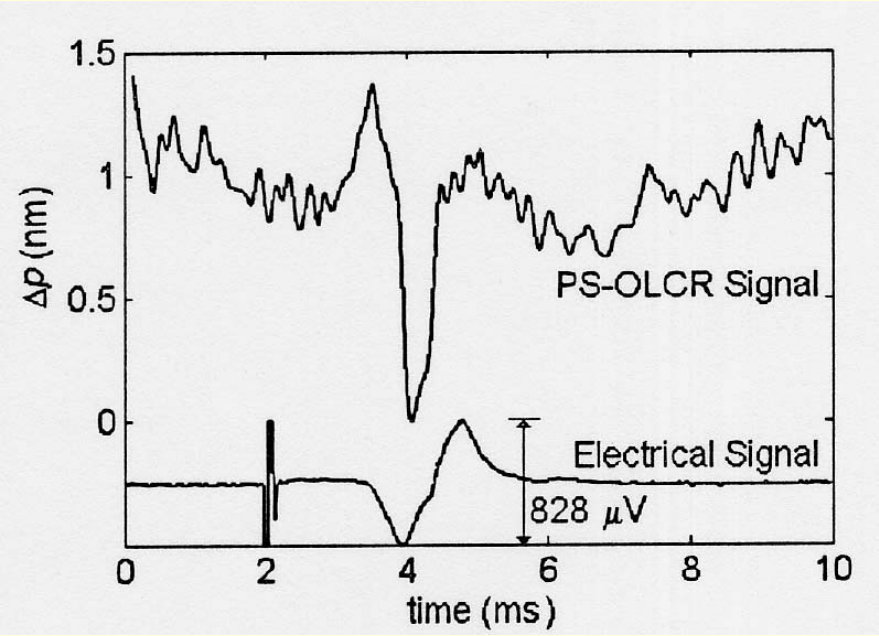
N/T = 6.09 °/100μm or Δn = 1.4 (10-4)

Neurotubule Loss: Basic Science, Clinical Trials

Functional Neural Imaging



Optical Action Potential Measurement



Applications: Basic Science, Drug Discovery, Clinical Diagnosis